

**BRANCH OF WILDLAND FIRE MANAGEMENT JOB HAZARD ANALYSIS:
CHAINSAW OPERATION**

JOB OR PROJECT TO BE ANALYZED CHAINSAW OPERATION (29 CFR 1910.266)	LOCATION
NAME OF ANALYST	TITLE OF ANALYST DATE
HAZARDS / JOB STEPS	ACTIONS TO ELIMINATE HAZARDS
<p align="center">USER SKILL LEVEL</p>	<p>Agency will provide formal training in chainsaw safety, personal protective equipment, saw operation, maintenance and first aid. Written certification records of individual training will be maintained by the agency. OSHA 1910. 266 (i) (2)-(10)</p> <p>Certification Requirements: Successful completion of Wildfire Powersaws (S-212) or other training that meets OSHA requirements.</p> <p>Demonstrated proficiency in saw operations for targeted and progressive levels of certification with training and experience. Field demonstration of qualifications in saw safety, falling, bucking, limbing and maintenance. Certification level based on the size class of the tree and complexity of interdependent factors (i.e., snags, steep terrain).</p> <p>Currency of qualifications is minimally maintained by performance in the position once every five years.</p> <p>Certification will require employee to complete approved Basic First Aid training every three years and CPR training every two years. Refer to BIA Blue Book for information pertaining to this requirement. OSHA 1910. 266 (i) 7</p>
<p align="center">PERSONAL PROTECTION EQUIPMENT and FIRST AID KITS</p>	<p>Agency will provide the employee with personal protection equipment including OSHA approved Hard Hat, Goggles or Face Shield, Ear Protection, Gloves, and cut resistant Saw Chaps which extend at least 2 inches below the top of the boots. Employee is required to wear cut resistant heavy duty leather boots. OSHA 1910. 266 (d) (1) (i) - (vii)</p> <p>Agencies will provide first-aid kits for each work site which reflect the degree of isolation, number of employees and hazards anticipated at the work site. OSHA 1910. 266 (d) (2) (i)-(iv)</p>

<p align="center">CHAINSAW SAFETY REQUIREMENTS</p>	<p>Chainsaws must be equipped with a chain brake and anti-kickback device. Chain saw will have a continuous pressure throttle control system which will stop the chain when released. OSHA 1910. 266 (e) (2) (i)-(ii)</p>
<p align="center">FUELING AND STARTING</p>	<p>Turn off saw before refueling. No smoking in fueling areas. Fuel saw at least 10 ft. from open flame. Start saw at least 10 ft. from fueling area. Start saw on the ground. Drop starting a saw is prohibited. Saw can be started with the chain brake engaged. OSHA 1910. 266 (e) (2) (ii)-(vii).</p> <p align="center">KEEP FUEL OFF CLOTHING AND PPE!</p>
<p align="center">CUTTING WITH THE SAW</p>	<p>Conduct a saw inspection prior to operation. Ensure all handles and guards are tight. Check controls for proper function. Check chain for proper adjustment. 1910. 266 (e) (1) (ii) (A)-(E)</p> <p>Use both hands to grip the saw at all times with thumbs of both hands encircling the handles. Establish firm, stable footing before beginning cut. Caution should be observed when cutting above your head or shoulders. 1910. 266 (e) (2) (viii) (ix)</p>
<p align="center">BAR KICKBACK</p>	<p>MAINTAIN FIRM GRIP ON THE SAW AT ALL TIMES! Avoid sawing with the bar tip. Prevent the bar tip from contacting limbs or boles beyond the cutting zone. Ensure that each saw is equipped with functional anti-kickback devices and chain brakes. 1910. 266 (e) (2) (I).</p>
<p align="center">LIMBING AND BUCKING</p>	<p>Maintain solid footing and grip the saw with thumbs encircling the bar and handle at all times. 1910. 266 (e) (2) (ix). The chain saw shall not be used to cut directly overhead. 1910. 266 (e) (2) (xi). Always position your body on the uphill side of the log you are limbing and bucking. 1910. 266 (h) (3) (i) Watch for limbs that may spring up when released by cuts. Plan all cuts and position your body and saw to reduce the potential for injury.</p>
<p align="center">SWAMPERS</p>	<p>Swampers must maintain a safe distance from the sawyer when cutting. Wait for the sawyer to stop cutting to remove debris. Never approach the saw operator before establishing visual contact.</p>

<p style="text-align: center;">CARRYING THE SAW</p>	<p>Carry the saw on the downhill side when traversing slopes. Make sure the chain and dogs are covered when carrying the saw over long distances. The chain saw will be shut down or chain brake engaged whenever the saw is carried more than 50 ft. where conditions such as thick brush, steep or slippery slopes create additional hazards. 1910. 266 (e) (2) (xiv).</p>
<p style="text-align: center;">SAFE WORKING DISTANCES</p>	<p>Maintain a safe working distance between fallers, swampers and crews at all times. Distances between fallers will be based on the height of the trees being felled. Greater distances should be considered on slopes where rolling or sliding of trees is possible. 1910. 266 (d) (6) (ii). Avoid working crews downslope of falling operations. Swampers should only work in the fall zone when needed as a lookout or to assist the faller. 1910. 266 (h) (1) (iv).</p>
<p style="text-align: center;">FALLING A TREE</p>	<p>Size up the tree for hazards such as rot, disease, widowmakers, loose bark, snow and ice accumulations, dead limbs and the location of adjacent trees. Determine how lean and branch distribution will affect direction of fall. 1910. 266 (h)(2)(ii). Clear brush and remove obstacles from intended retreat path before beginning cut. 1910. 266 (h) (2) (i).</p> <p>Utilize facecuts and backcuts in all trees 5" diameter and above. Leave sufficient hinge wood on the backcut so as not to compromise the intended direction of fall. Ensure backcut is above the level of the horizontal facecut. Use wedges when necessary. 1910. 266 (h) (2) (v - vii).</p> <p>Fall with the lean of the tree if possible. Know your skill level and capabilities. Don't be afraid to leave a tree without cutting it if you feel it is too hazardous.</p> <p>Check for snags in the direction of the fall. Prior to beginning your backcut shut the saw off and provide a loud warning signal to others. Utilize intended escape route. Once you are in the safety zone, watch out for flying debris as a result of the fallen tree. Once the tree is on the ground and you are returning to the stump location check for widowmakers or other aerial hazards.</p>

<p style="text-align: center;">CUTTING SNAGS</p>	<p>Check for rot, which will limit effectiveness of holding wood. Watch for weak tops, branches or bark that may fall during cutting operations. Wedging of snags is not advised. When practicable, snags should be felled in the direction of lean to eliminate the need to wedge.</p> <p>Only experienced fallers should cut snags. Don't be afraid to say no. Flag snags too hazardous to cut with "KILLER TREE" flagging.</p>
<p style="text-align: center;">BURNING OR BURNED TIMBER</p>	<p>Proper size-up is critical. Burning or burned tops can fall at any time. Watch for embers and burning material that can fall on you. Only experienced fallers should attempt this work and only when absolutely necessary.</p>
<p style="text-align: center;">ENVIRONMENTAL CONDITIONS</p>	<p>Avoid falling trees in high winds. Take extra precautions during wet conditions or while operating on steep slopes. Always use your best judgment with safety considerations during adverse environmental conditions.</p>
<p style="text-align: center;">OTHER PEOPLE OR VEHICLES ENTERING THE FALLING ZONE</p>	<p>Post Lookouts or roadblocks as necessary. Provide audible warning before starting backcut. Watch for others entering the fall zone.</p>
<p style="text-align: center;">SAW MAINTENANCE</p>	<p>Use gloves while handling the bar and chain. Wear long sleeve shirts and eye protection when using air compressors to clean saw. Limit exposure to cleaning solvents. No smoking in saw cleaning area, around fuel or solvents.</p>
<p style="text-align: center;">FATIGUE</p>	<p>Fatigue can affect safety by reducing physical skills and mental decision capabilities. Supervisors will monitor saw operator fatigue levels and provide for breaks as necessary. Saw operators must be cognizant of their own physical limitations. Extreme heat and cold can create rapid fatigue, be aware.</p>
<p style="text-align: center;">ACCIDENTAL FIRES</p>	<p>Check for chainsaw spark arrestor and inspect screen condition. Be aware of fire danger levels and requirements. Have a fire extinguisher and shovel available at the work site. 1910. 266 (d) (4)</p> <p>Flammable and combustible liquids can not be transported in any passenger occupied area of a vehicle. 1910. 266 (d) (9) (ii)</p>

UNSAFE PRACTICES	Hold safety meetings daily during crew or staff meetings. Counsel employees individually for unsafe practices and follow up to ensure compliance with safe practices. 1910.266 (i) (11)	
Approved By	Title	Date